

ASPIRES EVIDENCE BRIEF SERIES: SAVINGS GROUPS AND HIV OUTCOMES

Introduction

Economic factors are linked to HIV risk behaviors, as well as outcomes, at every stage of the HIV care and treatment cascade. The ASPIRES project conducted an extensive review of the literature on these linkages and produced an evidence brief series highlighting how different household economic strengthening (HES) interventions may affect HIV prevention, testing and linkage to care, retention in care, and antiretroviral therapy (ART) adherence.

This brief focuses on savings groups (SGs), community-based groups of people who save together and provide members with loans from the accumulated group savings. Evidence to date indicates that SG participation is associated with HIV risk reduction and that SGs may contribute to improved adherence among adults living with HIV.

Briefs in the Series:

Unconditional cash transfers	Conditional cash transfers
Individual savings	Group savings
Financial education	Income generation
Vocational/technical training	Business skills & entrepreneurship
Employment support	

What do we know?

HIV PREVENTION/RISK REDUCTION

ASPIRES found six references in our evidence review which aimed to assess correlations between SG participation and HIV risk reduction. One was conducted with a general adult study population and the remainder were with female sex workers (FSW).

A high-quality quasi-experimental study in Malawi assessed the relationship between SGs and HIV vulnerability. Participants in a multi-component intervention, including SGs, farmer field schools, HIV education and gender empowerment, as well as capacity building of local government structures had more than twice the odds of reporting an HIV-positive status compared to a control group. This finding could be linked with higher testing uptake in the intervention group (see next section). No intervention effects were observed on the odds of reporting unprotected sex with multiple partners. However, participants in the intervention group had a 26% lower odds of reporting food insecurity following the intervention compared to controls. Intervention participants also reported greater decreases in experiences of economic crises from illness or environmental disasters compared to controls, and had a 28% reduction in the odds of engaging in short-term agricultural labor to cope with economic shocks.

Together these findings point to an effect of the intervention on improved economic resilience (Weinhard et al., 2017)(Weinhardt et al. 2017).

In Tanzania, Mantsios and colleagues conducted a medium-high quality qualitative study with FSW participating in SGs and SG promoters. SG participation was reported to provide a safety net that helped participants through periods of financial need and supported greater economic security. Participation in SGs was also reported to facilitate individual agency which increased members' ability to reduce sexual risk behaviors through negotiating condom use and being selective about clients (Mantsios, Shembilu, et al., 2018).

Another medium-high quality study with FSW in Tanzania used cross-sectional survey data to assess the association between financial indicators, including SG participation, and consistent condom use. Mantsios and colleagues found that participating in a SG was significantly associated with 1.77 times greater odds of consistent condom use with new clients in the last 30 days. This relationship was partially mediated by increased financial security measured as total monthly income; approximately 23% of the effect of SGs on consistent condom use with new partners was mediated by financial security. However, SGs were not significantly associated with consistent condom use with regular clients or non-paying partners (Mantsios, Galai, et al., (2018). An earlier analysis of this study data was conducted on one cohort of participants. No quality assessment was conducted as this was a conference abstract. Researchers found that SG participation was also significantly associated with nearly three times higher odds of refusing unsafe sex and 63% lower odds of reporting an STI in the last six months. This analysis did not quantitatively measure economic indicators, but qualitative findings indicated that FSW perceived that SGs provide a financial safety net that helped them to avoid HIV risks (Mantsios et al. 2016).

A large, medium quality study of an empowerment intervention for FSW in India was conducted by Swendeman and colleagues. The intervention included group savings delivered through self-help groups, treatment for sexually transmitted infections, health education, condom promotion, and community advocacy/mobilization. They found that intervention participants had over six times the odds of refusing clients who would not wear condoms compared to those only getting health services. Economic effects of the intervention included increasing alternative income for older FSW and increasing savings, but the intervention was not linked to changes in loan-taking or working in other locations (Swendeman et al., 2009). Another medium quality study with FSW in India assessed an empowerment-focused intervention in which support varied between sites, but included social support, condom promotion, and health talks/education. Two of the three sites also had SGs. Intervention participants in the sites with SGs had between 3- and 7.5-times higher odds of using a condom with their last client compared to non-participants, depending on the site. However, other condom use findings were mixed. While economic indicators were not measured quantitatively, qualitative study data indicated that the SG component of the intervention reduced reliance on exploitative loans, allowing FSW to feel more comfortable refusing unsafe sex (Pillai et al., 2012).

HIV TESTING AND LINKAGE TO CARE

One study investigated the relationship between SG participation and HIV testing. Findings from the high-quality study in Malawi by Weinhardt and colleagues, described above, found that participants in a multi-component intervention, including SGs, had 1.9 times higher odds of reporting having tested for HIV compared to a control group. As described above, the intervention was also associated with improvements in food security and economic resilience (Weinhardt et al., 2017). No studies of SGs assessed linkage to care.

RETENTION IN HIV CARE AND ADHERENCE TO ART

ASPIRES found two published studies that examined the relationship between SGs and adherence to ART. A medium-high quality study evaluated the effects of an intervention in Ethiopia for food insecure adult PLHIV which incorporated several elements, including SGs, business development, and financial management training; those with severe hunger also received monthly cash or food support. Researchers used two approaches to assess the effects of the intervention on self-reported ART adherence, finding that participation was associated with a 2.4 or a 5.6 factor increase in the likelihood of reporting $\geq 95\%$ adherence compared to those not in the intervention, depending on the method used. This study did not measure economic outcomes resulting from the intervention (Bezabih et al., 2018).

A medium quality study, also in Ethiopia, assessed the effects of an intervention for adult PLHIV that combined SGs with health care, psychosocial support, income generating activities, and community mobilization. In contrast to the findings above, researchers found that a significantly smaller proportion of intervention participants (91%) reported that they were currently on ART compared to a control group (95%). A significantly higher percentage of participants in the control group also reported not having an opportunistic infection in the past six months (54%) compared to the intervention group (46%). However, the annual mortality rate among intervention participants declined from 10% to 0.7% over four years, suggesting some health benefits were obtained from participation. Researchers also examined changes in self-reported savings and found that a significantly larger proportion of intervention participants increased their household savings (37%) compared to controls (21%) (Okello et al., 2013).

NEW ASPIRES EVIDENCE

In addition to the published research, the ASPIRES project implemented two studies that examined the relationship between SGs and ART adherence. A retrospective mixed-methods study in Mozambique found that SG participation was associated with higher ART adherence based on clinical records (Swann, Lorenzetti, et al., forthcoming), and suggests potential pathways—such as improved economic security, improved food security, and an improved outlook—through which SG participation may influence adherence (Swann and Lorenzetti, forthcoming). A qualitative study with SG participants in Tanzania found that some members reported that SGs promoted their ART adherence through financial access, which enabled having food with which to take ART and transport to the facility and emotional support

and encouragement. In addition, SG participation was perceived to reduce the experience HIV-related stigma for some participants (Moret et al., forthcoming).

What does this Mean?

The evidence from the studies with FSW on HIV risk reduction indicate that SGs may be protective for this population. The Tanzania studies, in particular, point to a direct relationship between SG participation and reduced risk behavior. They indicate that SGs may enable FSW to engage in more protective behaviors by supporting their financial stability through higher income and the availability of a safety net. It is important to note, however, that they are based on cross-sectional data. The studies in India looked at intervention effects over time and suggest that augmenting HIV risk reduction education or support with SGs may be beneficial for FSW. These studies assessed combined interventions that incorporated SGs with several other program components, which limits our ability to understand the specific role of SGs in achieving the outcomes observed. However, these interventions supported FSW to save more in once case and reduce their reliance on exploitative loans in the other, suggesting that economic benefits of SG participation may have played a role in the risk reductions observed. This body of evidence supports the use of SGs within programming aimed at FSW risk reduction. Additional longitudinal studies that use random assignment and/or factorial designs would lend further weight to these findings and build an understanding of the temporal association between SG participation and risk reduction, as well as how SGs contribute to risk reduction for FSW vis-à-vis other program components.

There are too few studies with other populations to delineate a clear relationship between SG participation and risk reduction. All of the studies on risk-reduction relied on self-reported outcomes, therefore additional research that looks at biological outcomes related to HIV, such as HIV or STI incidence or prevalence would strengthen this evidence base. Those studies that assessed the economic outcomes of SG participation found that there were positive effects on participants' economic situation, pointing to the utility of SGs in helping highly vulnerable populations mitigate economic drivers of HIV risk.

While findings were not universally positive, the published research on SGs combined with the forthcoming studies from ASPIRES indicate that SG may support adults living with HIV to better adhere to their medications. Qualitative data show that both social and economic pathways may mediate this relationship. Therefore, incorporating SGs into adherence-focused interventions could bolster these outcomes. As with the prevention studies, there is a heavy reliance on self-reported data in relation to adherence, however, the one study that used clinical data on medication pick-up did find an association with this outcome. Experimental studies would provide more conclusive evidence in relation to this evidence base.

For more information on the studies included in this brief, reference the ASPIRES systematic review on HES interventions to address HIV outcomes (Swann, 2018a, b, c).

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